

# CLAIM AMENDMENTS

## Claim Amendment Summary

### **Claims pending**

- At time of the Action: Claims 1-52.
- After this Response: Claims 1-52.

**Canceled or Withdrawn claims:** 10, 20, 27, 44, and 51.

**Amended claims:** 9, 19, 26, 42 and 47.

**New claims:** none.

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## Claims:

1. **(ORIGINAL)** A method for facilitating enhanced readability of a fixed digital document, the method comprising:

obtaining a fixed digital document;

paginating one or more pages of the fixed digital document into multiple virtual pages;

identifying and locating lines of text within the one or more pages of the fixed document;

determining whether a virtual-page boundary is coextensive with an identified line of text;

responsive to such determining, adjusting the virtual-page boundary if the boundary is coextensive with the identified line of text so that the boundary is not coextensive with the identified line.

1  
2       **2. (ORIGINAL)**   A method as recited in claim 1 further  
3 comprising displaying a virtual page of the multiple virtual pages and doing so  
4 without displaying overlap.

5  
6       **3. (ORIGINAL)**   A method as recited in claim 1 further  
7 comprising displaying virtual pages of the multiple virtual pages, wherein  
8 unrepeatd content of multiple virtual pages starts at a common spatial position on  
9 the multiple virtual pages.

10  
11       **4. (ORIGINAL)**   A method as recited in claim 1 further  
12 comprising displaying virtual pages of the multiple virtual pages, wherein a top  
13 synthetic virtual-page margin is displayed so that the content of the virtual page  
14 starts at a common spatial position.

15  
16       **5. (ORIGINAL)**   A method as recited in claim 1, wherein the  
17 identifying and locating comprises performing at least minimal OCR on content of  
18 the document to locate line boundaries.

19  
20       **6. (ORIGINAL)**   A method as recited in claim 1, wherein the  
21 paginating comprises determining a minimum integer number of virtual pages per  
22 page of the digital document while maintaining legibility, aspect ratio, and good  
23 margins.  
24  
25

1           7.     **(ORIGINAL)**     A computer comprising one or more computer-  
2 readable media having computer-executable instructions that, when executed by  
3 the computer, perform the method as recited in claim 1.

4  
5           8.     **(ORIGINAL)**     A computer-readable medium having computer-  
6 executable instructions that, when executed by a computer, performs the method  
7 as recited in claim 1.

8  
9           9.     **(CURRENTLY AMENDED)** A     method     for     facilitating  
10 enhanced readability of a digital document, the method comprising:

11           paginating one or more pages of a digital document into multiple virtual  
12 pages, wherein the digital document is a fixed digital document;

13           placing a virtual-page boundary so that such boundary is not coextensive  
14 with a line of text.

15  
16           10.    **(CANCELED)**

17  
18           11.    **(ORIGINAL)**     A method as recited in claim 9 further  
19 comprising identifying and locating lines of text within the one or more pages of  
20 the digital document.

21  
22           12.    **(ORIGINAL)**     A method as recited in claim 9 further  
23 comprising determining whether a virtual-page boundary is coextensive with a line  
24 of text.

1           **13. (ORIGINAL)**    A method as recited in claim 12 further  
2 comprising responsive to such determining, adjusting the virtual-page boundary if  
3 the boundary is coextensive with a line of text so that the boundary is not  
4 coextensive with the line.

5  
6           **14. (ORIGINAL)**    A method as recited in claim 9 further  
7 comprising displaying a virtual page of the multiple virtual pages and doing so  
8 without displaying overlap.

9  
10          **15. (ORIGINAL)**    A method as recited in claim 9 further  
11 comprising displaying virtual pages of the multiple virtual pages, wherein  
12 unrepeatd content of multiple virtual page starts at a common spatial position on  
13 the multiple virtual page.

14  
15          **16. (ORIGINAL)**    A method as recited in claim 9, wherein the  
16 paginating comprises determining a minimum integer number of virtual pages per  
17 page of the digital document while maintaining legibility, aspect ratio, and good  
18 margins.

19  
20          **17. (ORIGINAL)**    A computer comprising one or more computer-  
21 readable media having computer-executable instructions that, when executed by  
22 the computer, perform the method as recited in claim 9.

1           **18. (ORIGINAL)**     A computer-readable medium having computer-  
2 executable instructions that, when executed by a computer, performs the method  
3 as recited in claim 9.

4  
5           **19. (CURRENTLY AMENDED)** A    method    for    facilitating  
6 enhanced readability of a digital document, the method comprising:

7            paginating one or more pages of a digital document into multiple virtual  
8 pages, wherein the digital document is a fixed digital document;

9            displaying the virtual pages of the multiple virtual pages and doing so  
10 without displaying overlap.

11  
12           **20. (CANCELED)**

13  
14           **21. (ORIGINAL)**     A method as recited in claim 19, wherein the  
15 paginating comprises separating the one or more pages of the digital document  
16 into multiple virtual pages without splitting lines of text of the document.

17  
18           **22. (ORIGINAL)**     A method as recited in claim 19, wherein the  
19 paginating comprises:

20            identifying lines of text within the digital document;

21            separating the one or more pages of the digital document into multiple  
22 virtual pages between lines of text.

1           **23. (ORIGINAL)**     A computer comprising one or more computer-  
2 readable media having computer-executable instructions that, when executed by  
3 the computer, perform the method as recited in claim 19.

4  
5           **24. (ORIGINAL)**     A method as recited in claim 19, wherein the  
6 paginating comprises determining a minimum integer number of virtual pages per  
7 page of the digital document while maintaining legibility, aspect ratio, and good  
8 margins.

9  
10          **25. (ORIGINAL)**     A computer-readable medium having computer-  
11 executable instructions that, when executed by a computer, performs the method  
12 as recited in claim 19.

13  
14          **26. (CURRENTLY AMENDED)** A method for enhancing the  
15 readability of a digital document, the method comprising:

16           paginating one or more pages of a digital document into multiple virtual  
17 pages;

18           displaying the virtual pages of the multiple virtual pages, wherein  
19 unrepeatd content of multiple virtual page starts at a common spatial position on  
20 the multiple virtual page;

21           lowlighting repeated content on a virtual page, the repeated content is  
22 content repeated from another virtual page.

23  
24          **27. (CANCELED)**

1           **28. (ORIGINAL)**     A method as recited in claim 26, wherein the  
2 paginating comprises separating the one or more pages of the digital document  
3 into multiple virtual pages without splitting lines of text of the document.  
4

5           **29. (ORIGINAL)**     A method as recited in claim 26, wherein the  
6 paginating comprises:

7           identifying lines of text within the digital document;

8           separating the one or more pages of the digital document into multiple  
9 virtual pages between identified lines of text.  
10

11          **30. (ORIGINAL)**     A method as recited in claim 26, wherein the  
12 paginating comprises determining a minimum integer number of virtual pages per  
13 page of the digital document while maintaining legibility, aspect ratio, and good  
14 margins.  
15

16          **31. (ORIGINAL)**     A computer comprising one or more computer-  
17 readable media having computer-executable instructions that, when executed by  
18 the computer, perform the method as recited in claim 26.  
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20          **32. (ORIGINAL)**     A computer-readable medium having computer-  
21 executable instructions that, when executed by a computer, performs the method  
22 as recited in claim 26.  
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1           **33. (ORIGINAL)**     A method for facilitating enhanced readability  
2 of a fixed digital document, the method comprising:

3           paginating one or more pages of the fixed digital document into multiple  
4 virtual pages;

5           displaying one or more virtual pages of the multiple virtual pages and doing  
6 so with overlap on a virtual page, wherein the overlap of one virtual page includes  
7 content of the document repeated from another virtual page;

8           indicating such overlap during the displaying, wherein the content of  
9 overlap is differentiated from other content.

10  
11           **34. (ORIGINAL)**     A method as recited in claim 33, wherein the  
12 overlap is lowlighted.

13  
14           **35. (ORIGINAL)**     A method as recited in claim 33, wherein  
15 unrepeatd content of multiple virtual page starts at a common spatial position on  
16 the multiple virtual page.

17  
18           **36. (ORIGINAL)**     A method as recited in claim 33, wherein the  
19 overlap is softly lowlighted.



1           **37. (ORIGINAL)**     A method as recited in claim 33, wherein the  
2 overlap is shaded.

3  
4           **38. (ORIGINAL)**     A method as recited in claim 33, wherein the  
5 overlap is "grayed."

6  
7           **39. (ORIGINAL)**     A method as recited in claim 33, wherein the  
8 paginating comprises determining a minimum integer number of virtual pages per  
9 page of the digital document while maintaining legibility, aspect ratio, and good  
10 margins.

11  
12           **40. (ORIGINAL)**     A computer comprising one or more computer-  
13 readable media having computer-executable instructions that, when executed by  
14 the computer, perform the method as recited in claim 33.

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16           **41. (ORIGINAL)**     A computer-readable medium having computer-  
17 executable instructions that, when executed by a computer, performs the method  
18 as recited in claim 33.  
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1           **42. (CURRENTLY AMENDED)** A method for facilitating the  
2 enhanced readability of a digital document, the method comprising:

3           determining an integer number of virtual pages per page of a digital  
4 document while maintaining legibility, aspect ratio, and good margins, wherein the  
5 digital document is a fixed digital document;

6           paginating, accordingly, one or more pages of the digital document into  
7 multiple virtual pages.

8  
9           **43. (ORIGINAL)** A method as recited in claim 42, wherein the  
10 determining determines the minimum integer number of virtual pages per page of  
11 the digital document.

12  
13           **44. (CANCELED)**

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15           **45. (ORIGINAL)** A method as recited in claim 42 further  
16 comprising displaying one or more of the virtual pages.

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18           **46.** A computer-readable medium having computer-executable  
19 instructions that, when executed by a computer, performs the method as recited in  
20 claim 42.

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2       **47. (CURRENTLY AMENDED)** A reading enhancement system,  
3 comprising:

4       a document obtainer configured to obtain a digital document, wherein the  
5 digital document is a fixed digital document;

6       a virtual paginator configured to paginate one or more pages of the digital  
7 document into multiple virtual pages, the virtual pages having boundaries there  
8 between;

9       a virtual-page analyzer configured to analyze the virtual page;

10       a display generator configured to generate and send the virtual pages of the  
11 multiple virtual pages to a display.

12  
13       **48. (ORIGINAL)** A system as recited in claim 47, wherein the  
14 analyzer is further configured to:

15       identify and locate lines of text within the one or more pages of the digital  
16 document;

17       determine whether a virtual-page boundary is coextensive with an identified  
18 line of text;

19       responsive to such determining, adjust the virtual-page boundary if the  
20 boundary is coextensive with the identified line of text so that the boundary is not  
21 coextensive with the identified line.

1           **49. (ORIGINAL)**     A system as recited in claim 47, wherein the  
2 analyzer is further configured to produce lowlighted overlap, wherein the overlap  
3 of one virtual page includes content of the document repeated from another virtual  
4 page.

5  
6           **50. (ORIGINAL)**     A system as recited in claim 47, wherein the  
7 virtual paginator is further configured to determine a minimum integer number of  
8 virtual pages per page of the digital document while maintaining legibility, aspect  
9 ratio, and good margins.

10  
11           **51. (CURRENTLY AMENDED)** A computer-readable medium  
12 having computer-executable instructions that, when executed by a computer,  
13 performs the method comprising:

14           padding one or more pages of a digital document into multiple virtual  
15 pages, wherein the digital document is a fixed digital document;

16           placing a virtual-page boundary so that such boundary is not coextensive  
17 with an identified line of text.  
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1           **52. (ORIGINAL)**     A computer-readable medium having computer-  
2 executable instructions that, when executed by a computer, performs the method  
3 comprising:

4           paginating one or more pages of a digital document into multiple virtual  
5 pages;

6           displaying one or more virtual pages of the multiple virtual pages and doing  
7 so with lowlighted overlap, wherein the overlap of one virtual page includes  
8 content of the document repeated from another virtual page.

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